

### REMARKS

Claims 1-80 were examined in the outstanding office action mailed on 12/26/2008 (hereafter "Outstanding Office Action"). All claims were rejected. By virtue of this response, claims 1-3, 5-6, 8-13, 16-18, 21-43, 45-46, 48-53, 56-58, 61-63, 65-66, 68-73, and 76-78 have been amended. The amendments are believed not to introduce new subject matter and their entry is respectfully requested.

### CLAIM REJECTIONS – 35 USC § 103

Claims 1-4, 9, 12, 21-24, 29, 32, 41-44, 49, 52, 61-64, 69, and 72 are rejected under 35 USC § 103(a) as being unpatentable over Aram (US 2002/0072986) in view of Grosvenor et al (US 7,216,086).

Applicants respectfully disagree and assert that claim 1 is not obvious in view of Aram and Grosvenor.

#### Claim 1 recites:

A method of processing orders related to a family of products in a supply chain management system, said family of products containing a plurality of member items, said plurality of member items having similarities in resource requirements, said method comprising:  
receiving in a computer system a time fence (TF) duration associated with each of said plurality of member items in pair with a first member item, wherein said first member item is also contained in said plurality of member items of said family, wherein said TF duration associated with a member item in pair with said first member item represents an amount of advance time duration after which the supply of that member item is available to satisfy the demand for said first member item;  
receiving in said computer system a first order specifying a first required quantity of said first member item and a first required date, wherein said first required date is after said TF duration from a time said first order is received, and wherein only Qavail units of said first member item are scheduled to be available as of said first required date, wherein Qavail is less than said first required quantity;  
determining in said computer system a first available quantity of all of said plurality of member items scheduled to be available after said TF duration and as of said first required date, and a second available quantity of said first member

item scheduled to be available as of end of said TF duration; and indicating in said computer system that said first order be promised if said determining determines that said first available quantity and said second available quantity scheduled to be available as of said first required date is sufficient to fulfill said first required quantity.

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Independent claim 1 above recites a method for processing orders related to a family of products that contain a plurality of member items. A family of products refers to a group of products and the member items or products in the family of products have similarities in their resource requirements. Claim 1 uses this relationship between the products in the family to determine whether an order for a member item (or a product) in the family of products can be promised. The promising of the order is based not only on the availability of the ordered member item itself but also based on the availability of other member items in the family of products.

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Aram does not teach the features of claim 1. Aram is related to ordering of items by a customer from an intermediary and provides customers and suppliers interfaces to the data store. The customer interface receives a request for an item from a customer, outputs data related to an offer to supply the requested item to the customer based on stock levels, and receives from the customer and stores in the data store order data for the requested item. The supplier interface operates to receive from the supplier data related to the level of stock of an item or a part for the item and to output customer order data for the item to the supplier. (Paragraph 0007 of Aram)

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Aram is related to orders for an item and does not teach or suggest processing of orders related to products in a family of products. In fact Aram does not teach anything related to a family of products. As will be discussed below, an "item" in Aram does not have the characteristics of a product or "member item" in a family of products as in claim 1. A "member item" in a family of products in claim 1 has similarities with other member items in the family of products in terms of their resource requirements. On the other hand, the "item" in Aram is not a member of any family of products and does not have characteristics as described above with respect to "member items" in claim 1.

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Applicants submit that several features of claim 1 above are not taught or reasonably suggested by Aram.

5            The Final Office Action on page 2 equates the “member items of the family of products” in claim 1 to “parts for the item requested” in Aram. It appears then the Final Office Action is implying that an “item” in Aram is equivalent to the “family of products” in claim 1. This is incorrect. The family of products in claim 1 contains a plurality of “member items” which are different products in the family of products. Additionally, the “member items” in the family of products have similarities in terms of their resource requirements. (See specification page 3, lines 6-13). On the other hand, there is no teaching or suggestion of the concept of “family of products in Aram and of processing orders related to a “family of products”. There is also no teaching or suggestion that the “item” in Aram contains products or member items. Although, the “item” in Aram does contain “parts”, these parts are not equivalent to the member items in claim 1 since these  
10            “parts” in Aram have not been described as having similarities in terms of their resource requirements.

            One of ordinary skill in the relevant art will not reasonably equate Aram’s “item” containing “parts” to “family of products” containing “member items” as in claim 1. The  
20            relation between items and its parts and between the parts themselves is different from the relation between a family of products and its member items and between the member items themselves. Although, for the sake of argument, the parts of an item may be individually considered as different products but they are all components required in the manufacturing of a single item or a single end product. On the other hand, the products or  
25            member items in a family of products are different products having some common components and are not components of a single end product (see specification page 3 lines 6-13).

            The Office Action further alleges that paragraphs 0023-0025, 0032, and 0036 of  
30            Aram teach the “receiving in a computer system a time fence (TF) duration” feature of claim 1; paragraphs 0017-0021 of Aram teach the “receiving in said computer system a first order” feature of claim 1; paragraphs 0017-0024, 0036 of Aram teach the

“determining in said computer system a first available quantity” feature; and paragraphs 0017-0021 of Aram teach the “indicating in said computer system” feature of claim 1.

Applicants respectfully disagree on several counts.

For example, Paragraphs 0023-0025, 0032, and 0036 of Aram are alleged as teaching the “receiving in a computer system a time fence (TF) duration” feature of claim 1.

Although, on page 3, the Final Office Action acknowledges that Aram does not teach a time fence (TF) duration, Applicants have addressed the cited portions of Aram to advance prosecution. It is shown below that none of these paragraphs, either alone or in combination, teach or reasonably suggest the “time fence duration” feature of claim 1.

(Paragraphs 0023-0025, 0032, and 0036 of Aram)  
[0023] The ATP system can calculate a date on which the items can be guaranteed to be available to the customer...If the **calculated date** is on or before the **customer's desired date**, the system can promise to meet the customer's needs; if the calculated date is later than the desired date the system can offer the items on the **later date** and the customer may then choose whether to accept the offer...

[0024] In a preferred embodiment the ATP system determines whether and/or when the customer request can be met by examining first the stock level of items or parts for the items held by the intermediary, and then the level of the stock held by the supplier...

[0025] If the date cannot be met, the computer system may split the customer request into a part which can be met by the **desired date** and the part which is to be supplied by a **later promised date**. Additionally, or alternatively, the customer may be offered substitute items available at an **earlier date or time**. Since a customer will normally require delivery of the ordered items on a **specified date** and no earlier, the system may also reallocate items allocated to earlier orders to optimize the response to a given customer request for items to be delivered on a desired date.

[0032] Further the embodiments of the invention provide a corresponding method for facilitating customer ordering of items from an intermediary such as a manufacture or distributor...An indication of a level of stock of an item or of a part form an item is received from the supplier and stored in the data store. A request for the item is then received from the customer and offer data is output for making an offer to supply the requested item to the customer based upon the level of stock of the item or a part for the item. Order data for the requested item is

then received from the customer and stored in the data store, and this data is also output to the supplier...

[0036] Advantageously the demand schedule includes an indication of the level of stock of the item or part held by the intermediary user, so that the supplier can take this into account when planning to meet the customer demand. Preferably, an order on the demand schedule includes a request for a specified number of items or parts and a *corresponding due date/time* by when these should be available. It is also preferable that the demand schedule has provision for including a forecast number of items or parts required and the corresponding due date, so that an order which it is known will be made...

These paragraphs of Aram describe several time related terms such as calculated date, desired date, later date, later promised date, etc. But none of these time related terms or dates are equivalent to the time fence duration in claim 1. For example, desired date is customer indicated date by when the item is desired (see Aram paragraph 20). Calculated date is the date calculated by the system by which the items can be guaranteed to be available to the customer. Later date and later promised date refer to dates calculated by the system when the items will be available later than the desired date.

None of these are equivalent to the time fence duration in claim 1 that is associated with a member item in pair with another member item where the member items in the pair are members of a family of products and have similarities in terms of their resource requirements. Claim 1 recites a time fence duration associated with a member item in pair with the ordered first member item. This time fence duration represents the amount of advanced time duration after which the supply of the member item (and NOT the ordered member item) in that pair is available to satisfy the demand for the ordered first member item. See specification page 3:17 to page 4:8 and page 7: 5-18. Such a feature is not taught or suggested in the above paragraphs of Aram.

Paragraphs 0017-0021 of Aram are alleged as teaching the "receiving in said computer system a first order" feature of claim 1. Applicants respectfully disagree.

(Paragraph 0017-0021 of Aram)  
[0017] Preferably, the data store is further configured for indicating a due date or time when a lot or batch of items or parts is expected to arrive at the intermediary. This allows the transit time between the supplier and intermediary to likewise be taken into account when

making an offer to supply items to a customer.

[0018] It is further preferable that an offer made to a customer should take account of any offers previously made and items or parts for items allocated against these orders.

[0019] The offer data may comprise a date and/or time to indicate to the customer by when the request can be met. This allows a customer to request items from the intermediary, the computer system then calculating when the requested items can be delivered. The customer can then decide whether the delivery date meets their requirements.

[0020] In a preferred embodiment, the customer interface further comprises *means to receive a data and/or time the customer indicating by when the item is desired*, and means to determine whether the request can be met and to let the customer know the outcome. This allows the provision of an "available-to-promise" (ATP) customer order system.

[0021] In such systems, the determination of whether the customer request can be met can be made based upon the knowledge of the supplier's stock and work-in-progress. This allows the intermediary to promise delivery to the customer earlier than would otherwise be possible since the intermediary, (or at least the computer system) can determine what stock will be available for promising to the customer, and when.

From the above paragraphs only paragraph 0020 describes receiving data from a customer where the data appears to correspond to a customer's request for an item by a desired date. Applicants point out the inconsistency in the Final Office Action. On page 2, the Final Office Action equates the "parts for the item requested" in Aram to the "member items" in claim 1. But with respect to this feature of claim 1 it appears that the Examiner is equating the "item" in Aram to the "member item" in claim 1. However, in order to advance prosecution, Applicants arguments have been presented based on the latter.

Firstly, the request in Aram is for an item, and as discussed earlier the "item" in Aram is different from a "member item" in claim 1. The "item" in Aram is not described as belonging to a family of products that contains other member items, where all the member items in the family including the "item" have similarities in terms of their resource requirements. Secondly, the request for an item in Aram does not include the conditions recited with respect to the first order in claim 1. According to claim 1, the first required date of the first order is after the time fence duration from the time the first order

was received, i.e., first required date is after (time of receiving first order + time fence duration). Accordingly, Applicants submit that the above paragraphs of Aram do not teach the “receiving in said computer system a first order” feature of claim 1.

5            Paragraphs 0017-0024, and 0036 of Aram are alleged as teaching the “determining in said computer system a first available quantity” feature of claim 1. Applicants respectfully disagree. This feature of claim 1 determines, a) a first available quantity that is the available quantity of all of the member items in the *family of products (having similarities in resource requirements)* after the *TF duration* and as of the first required  
10    date, and b) a second available quantity that is the available quantity of the first member item as of the end of the *TF duration*. As discussed above, Aram does not teach or suggest processing orders related to a “family of products” and the concept of the “time fence duration” as recited in claim 1. Since the determining in claim 1 of the first available quantity and the second available quantity are related to the family of products  
15    and are dependent upon the time fence duration; Aram cannot possibly teach or suggest determining the first available quantity and the second available quantity as is recited in claim 1. The cited portions of Aram as discussed earlier also do not teach or suggest the “determining in said computer system a first available quantity” feature of claim 1.

20           Paragraphs 0017-0021 of Aram are alleged as teaching the “indicating in said computer system” feature of claim 1. Applicants respectfully disagree. According to this feature of claim 1, if it is determined that sufficient quantities of both first available quantity and second available quantity are scheduled to be available to fulfill the first required quantity as of the first required date then the system indicates that the order can  
25    be promised. Aram does not teach or suggest such a feature with respect to an ordered item. *Since Aram does not teach or suggest processing orders related to a family of products, the ordered item in Aram does not have any related member items. Accordingly, Aram cannot utilize the availability of any related member items to promise availability of the ordered item by the requested date.*

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Although, Aram suggests several methods to determine whether the ordered item can be promised none of these methods are equivalent to the teachings of claim 1. For example:

The system in Aram, examines the stock level of the items or parts for the items at various sources such as the intermediary, supplier, and supplier's work in progress (paragraph 0024 of Aram). But the system is restricted to examining stock levels of the ordered item itself (or parts of the item). Since the ordered item is not part of any family of products, the ordered item does not have any other related member items and therefore Aram does not have the option of examining and utilizing the stock levels of the related member items in order to determine whether the ordered item may be promised.

In addition to examining stock levels of the items at various sources, the system in Aram also works with the date when the order for the item can be promised. For example if the complete ordered item cannot be promised by the desired (or requested) date then the system offers various options to the customer. A) The system offers another date (later date) to the customer and then the customer may choose whether to accept the offer (paragraph 0023 of Aram). B) The system splits the order into a part that can be met by the desired date and the part, which is to be supplied by a later date (paragraph 0025 of Aram). However, in all of the above cases the system is examining availability of the ordered item (or its parts) itself and is not examining availability of any other related member items as is recited in claim 1 with respect to the ordered first member item and the plurality of member items.

Aram also describes offering substitute items to the customer that may be available at an earlier date or time (paragraph 0025 of Aram). However, the offer is for a substitute item, which is different from the ordered item. Therefore the system is not promising availability of the ordered item by the requested date but is *promising availability of a substitute item*. This is also not equivalent to *promising the ordered item* by examining availability of other (member) items in addition to the ordered item.

More specifically, none of the above paragraphs of Aram teach or suggest, indicating that the order can be promised if it is determined that sufficient quantities of both first available quantity (of member items) and second available quantity (ordered first member item) are scheduled to be available to fulfill the first required quantity as of the first required date.

Accordingly, Applicants submit that Aram does not teach the features of claim 1.



On page 3, the Final Office Action states that:

Aram teaches time duration associated with each item but fails to explicitly teach a time fence duration. However, in the same field of endeavor, Grosvenor et al teach a supply management system that uses time fence duration (see at least column 4, lines 46-51). It would have been obvious to one of ordinary skill in the art to combine the teachings of Grosvenor with Aram because doing so would allow for Aram's system to obtain a period of time for when the parts for an item are available in order to estimate a time period of when the order will be fulfilled.

Applicants respectfully disagree.

Grosvenor is related to a method and apparatus that provides a supply chain management system useful in outsourced manufacturing and describes a method of automatically identifying and resolving discrepancies in the outsourced manufacturing supply chain in which several supply chain partners participate.

The time fence described at col. 4:46-51 of Grosvenor is a period of time for performing a task, defined by a start time, end time, and agreed-upon percentage of time by which the start time or end time may vary. Also, Grosvenor describes that time fences are agreed upon in advance between partners.

Applicants submit that, firstly, Grosvenor does not teach anything related to processing of orders related to a family of products. Secondly, the time fence described in Grosvenor is completely different from the time fence duration in claim 1. The *time fence duration in Grosvenor is a time period for performing a task* and is agreed between partners in advance, whereas the time fence duration in claim 1 is *an amount of advance time duration used to determine when supply of one member item is available to satisfy demand for another ordered member item*, the two member items considered in pair and being members of a family of products. Therefore, the time fence in Grosvenor is different from the time fence duration in claim 1. Accordingly, Applicants submit that Grosvenor also does not teach or suggest processing orders related to a "family of products" and the "time fence duration" of claim 1.

Applicants also submit that one of ordinary skill in the relevant art will not consider combining Grosvenor and Aram (without the benefit of the disclosure of the

subject application) at least for the following reasons. In Grosvenor the time fence is defined for a partner (col. 24:41-45 of Grosvenor) and it appears to be the *time period defined for the partner for performing a task*. In no manner can this time fence of Grosvenor be associated with each item in Aram since *the items in Aram do not perform any task*. For the sake of argument, if one of ordinary skill in the relevant art would consider combining the time fence teaching of Grosvenor with Aram then that would probably suggest a time fence defined for one of intermediary, supplier, or customer in Aram to perform a task. For example, time fence for a supplier may be a time period to perform a task related to determining whether the requested item may be promised.

Accordingly, Applicants submit that one of ordinary skill in the relevant art would not consider combining Grosvenor and Aram to teach or suggest the features of claim 1.

Therefore, Applicants submit that Aram and Grosvenor considered either individually or in combination do not teach the features of claim 1.

At least for such a reason, independent claim 1 is allowable over the art of record. The remaining independent claims are also allowable for similar reasons. The dependent claims are allowable at least as depending from the corresponding base claims.

### *Conclusion*

Withdrawal of the final rejection and continuation of examination is respectfully requested. The Examiner is invited to telephone the undersigned representative at (443) 552-7281 (4AM-Noon EST) if it is believed that an interview might be useful for any reason.

Respectfully submitted,  
/Narendra Reddy Thappeta/  
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